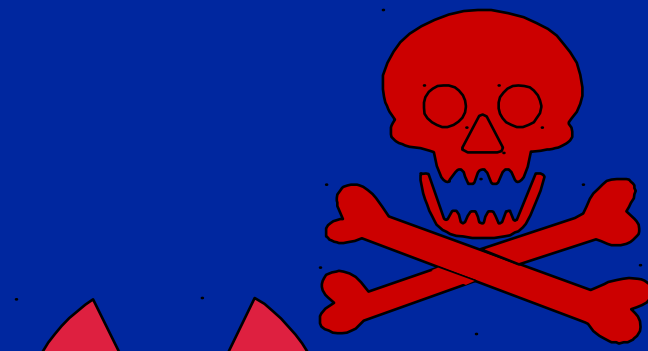
Introduction to CBRNE

CBRNE

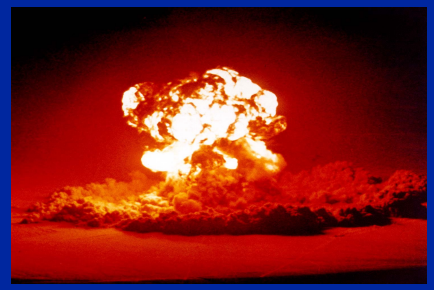


Chemical agents

Biological agents

Radiological agents

Nuclear devices



AMEDDC&S

TO CONSERVE FIGHTING STRENGTH

CBRNE Threats

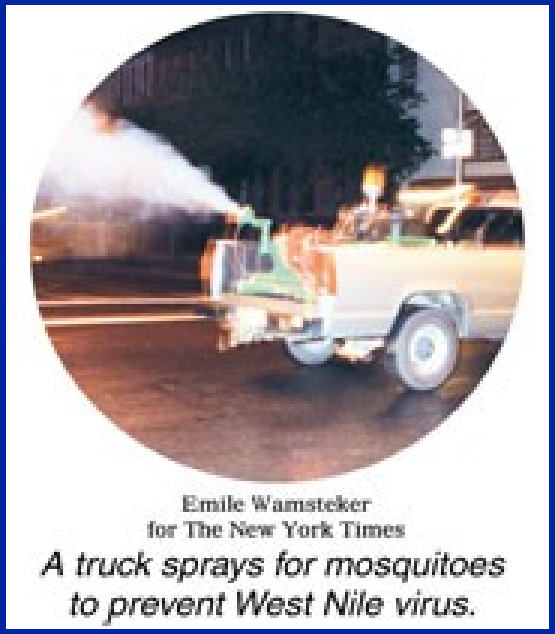
- Lone individuals
- Identified local or non-aligned terrorist groups
- Internationally sponsored
- Doomsday cults
- Insurgents

CBRNE Terrorism

Why CBRNE Terrorism?

- Agents are available & relatively easy to manufacture
- Large amount not needed in enclosed space
- CBRNE incident difficult to recognize
- Easily spread over large areas
- Psychological impact
- Can overwhelm existing resources

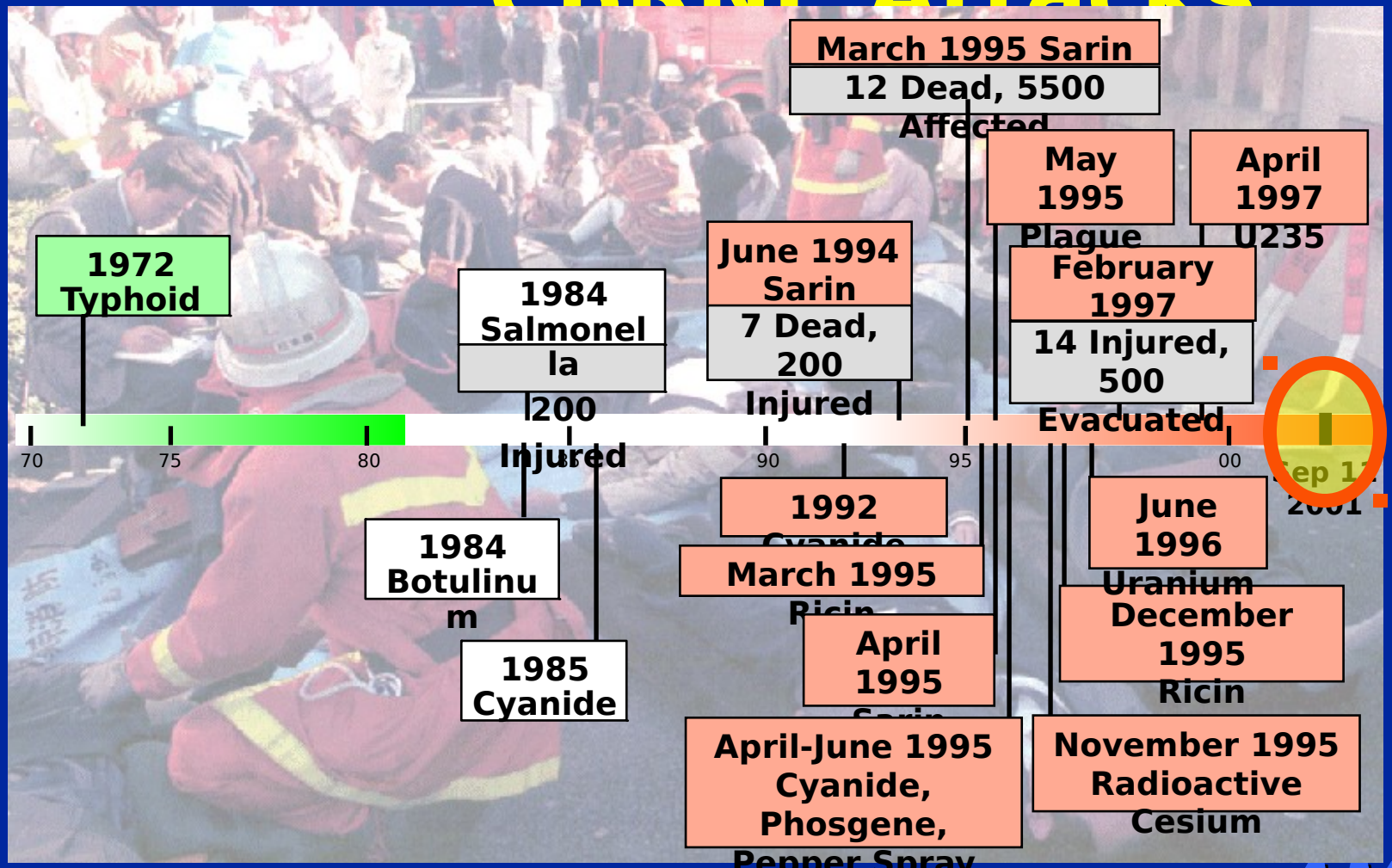
Many Possible Method of Disseminat



Emile Wamsteker
for The New York Times

A truck sprays for mosquitoes to prevent West Nile virus.

CBRNE Attacks



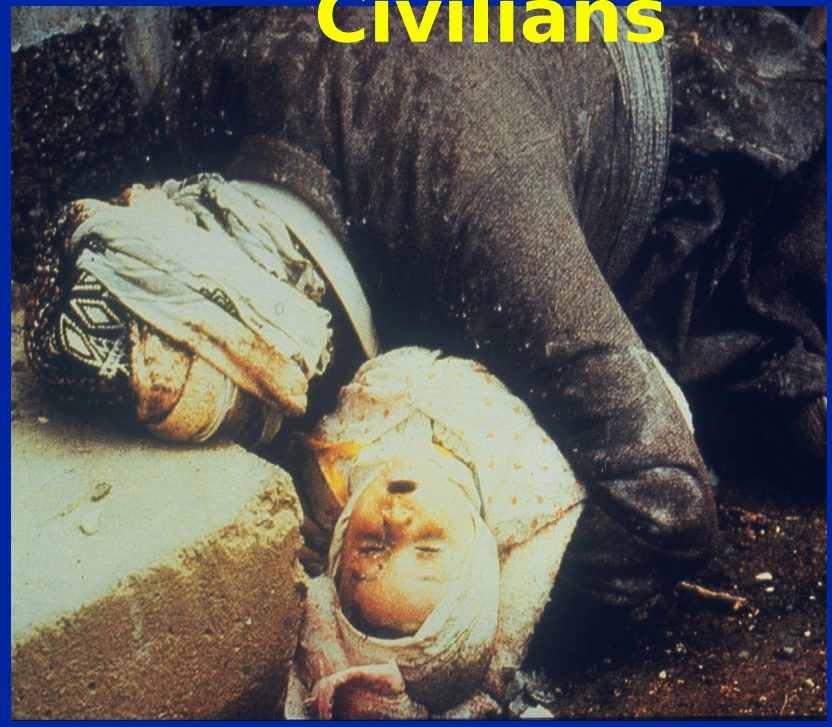
Chemical Agents

Chemical Warfare Agents	Industrial Chemicals
• Nerve • Blood • Blister • Choking	• Insecticides • Chlorine • Phosgene • Many others

State Use of Chemical Warfare Agents

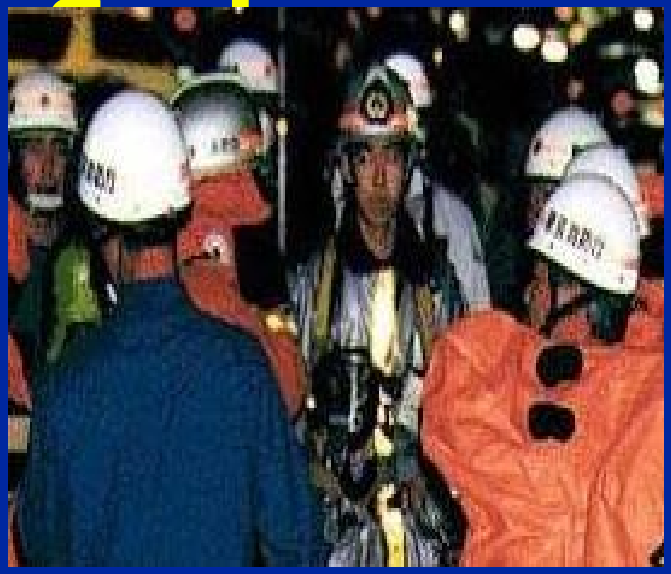
Iran-Iraq War

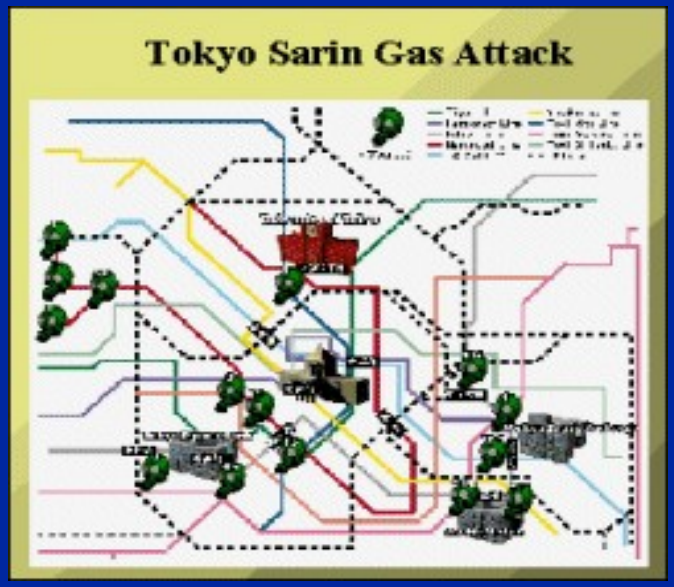
Iranian and Kurdish Civilians



Terrorist use of Chemical Agents

1995: Aum Shinrikyo cult attacks Tokyo subway with





Biological Agents

- Anthrax
- Small Pox
- Salmonella
- Typhus
- Tularemia
- Brucellosis
- and the list goes on and on….

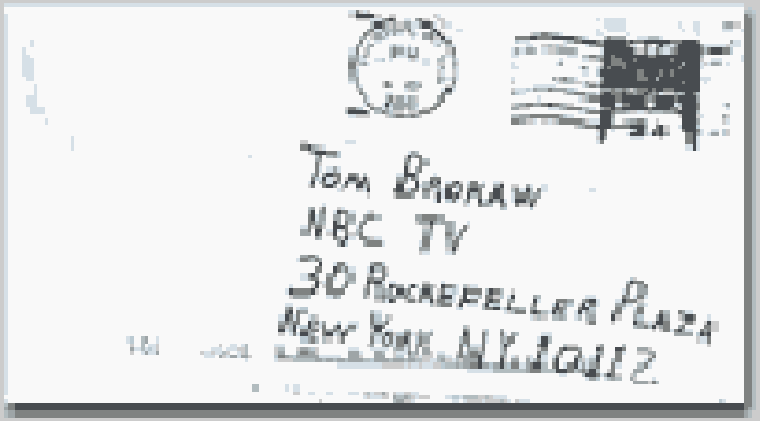
Numerous Types

Different Exposure Routes

Different Infectivity

Different Treatability

ANTHRAX



Cutaneous

Pulmonary

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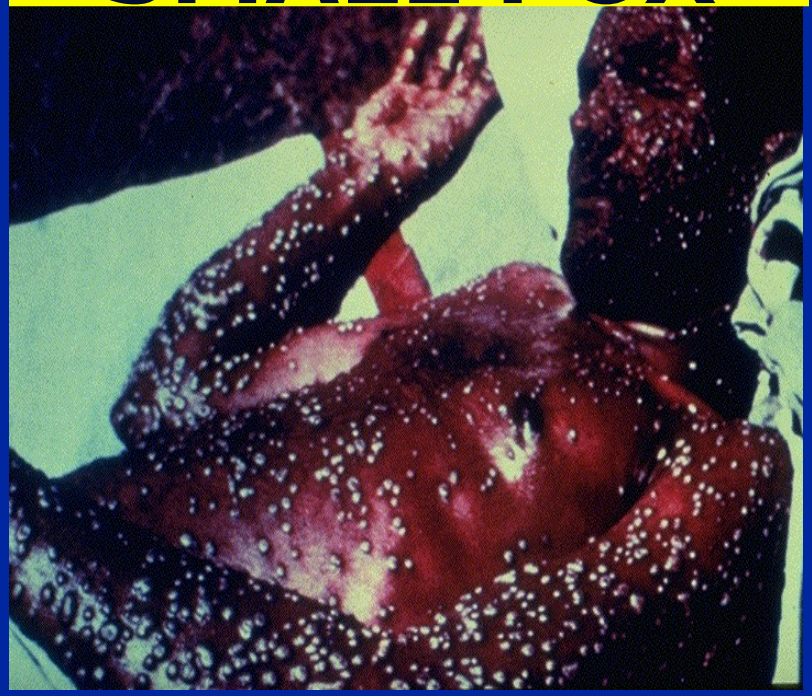
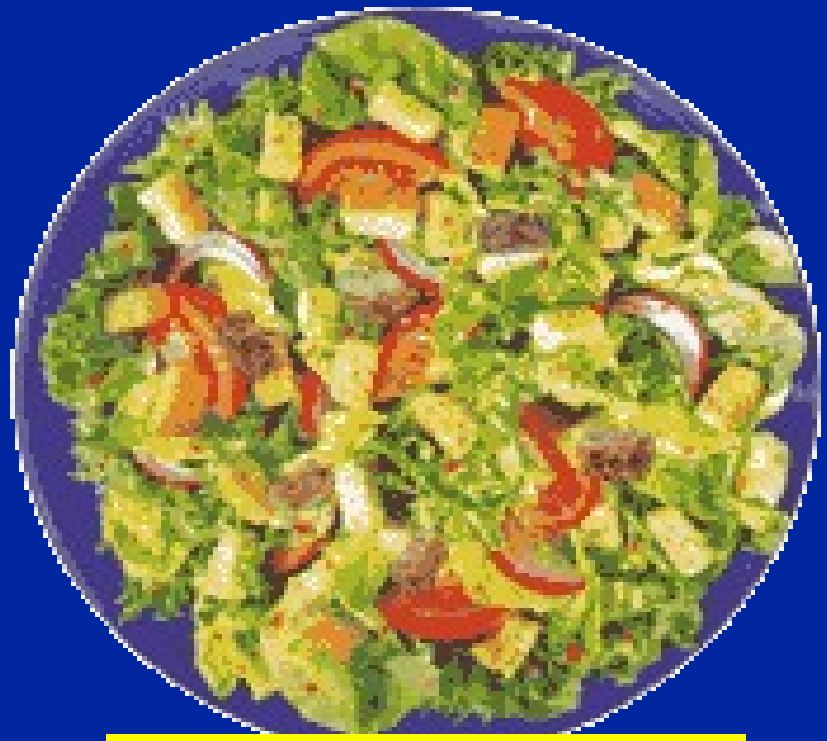
Biological Agents

SMALL POX

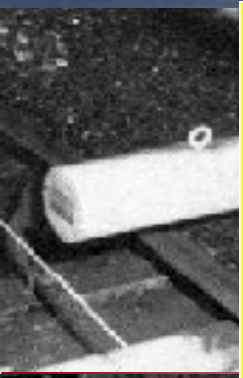




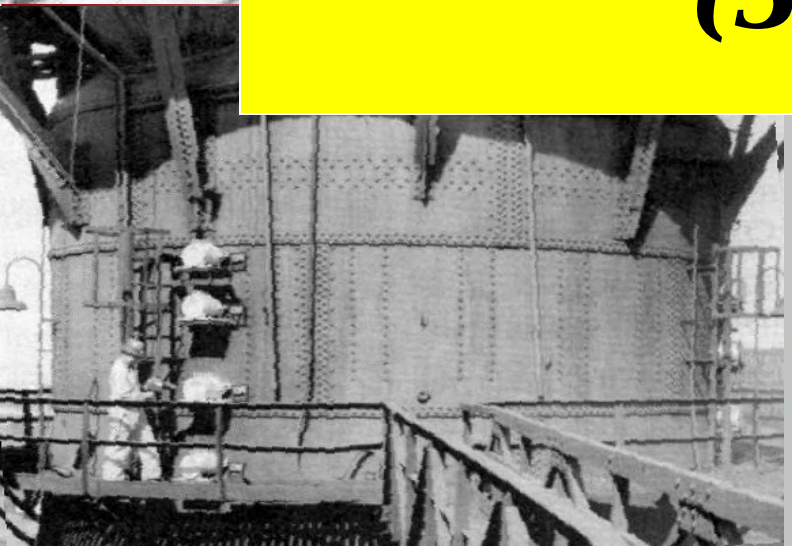
Salmonella

Radiological Threat

- Growing concern of Radiological Dispersal Devices ("Dirty Bombs")
- Seen in Chechnya attack on Moscow Park in 1995
- Sources are widely available



500,000 Significant Radioactive Sources World-Wide (30,000 disused)



Casualties: Hiroshima - Nagasaki

- Hiroshima
  - Killed -- 70,000
  - Injured -- 70,000
- Nagasaki
  - Killed -- 36,000
  - Injured -- 40,00

High Explosive Devices

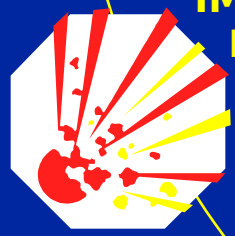
World Trade Center
September 11, 2001

Potential Probability vs. Impact

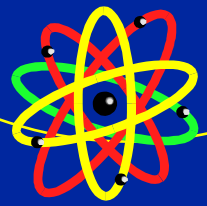
NUCLEAR WEAPON

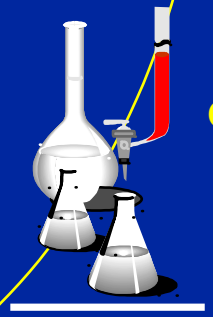
BIOLOGICAL AGENT

IMPROVISED NUCLEAR DEVICE



RADIOACTIVE MATERIAL





CHEMICAL AGENT OR TOXIC INDUSTRIAL CHEMICAL

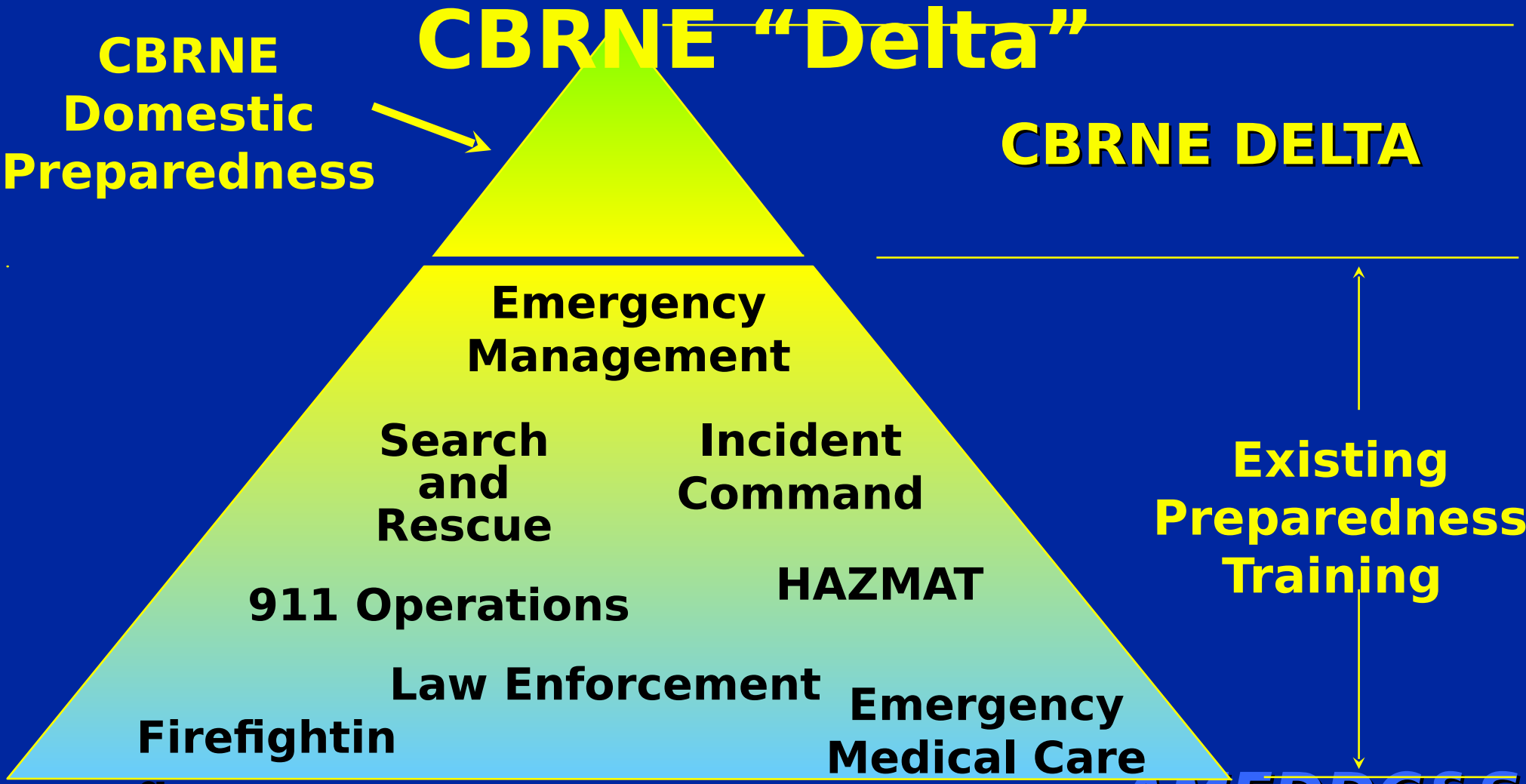
POTENTIAL IMPACT

PROBABILITY/LIKELIHOOD

Partnership
F E M A
D O E
Domestic
Preparedness
P H S
F B I
E P A
EMERGENCY RESPONDERS
DoD

CBRNE "Delta"

CBRNE Domestic Preparedness



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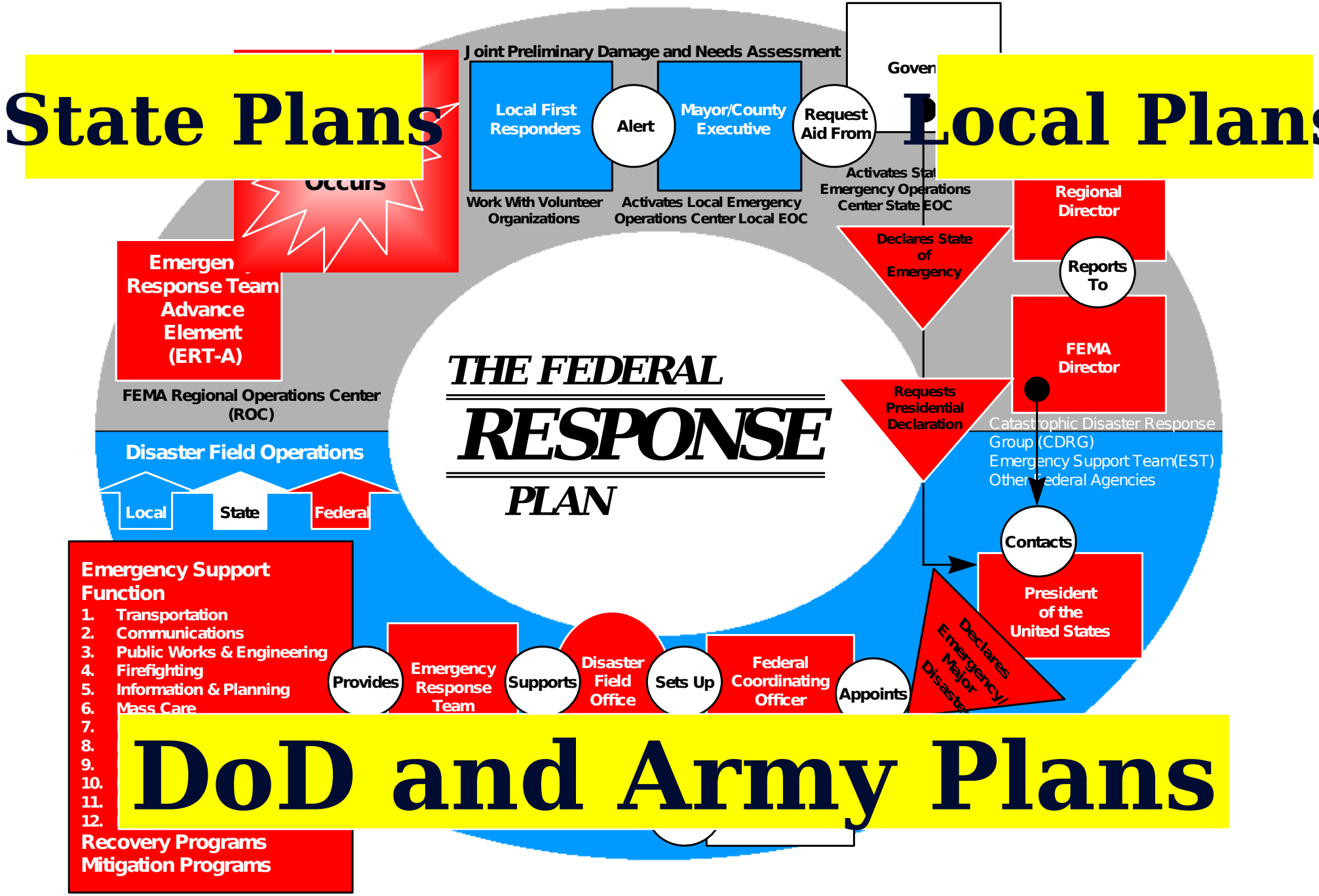

State Plans
Local Plans
Joint Preliminary Damage and Needs Assessment
Local First Responders
Alert
Mayor/County Executive
Request Aid From
Work With Volunteer Organizations
Activates Local Emergency Operations Center Local EOC
Activates State Emergency Operations Center State EOC
Regional Director
Declares State of Emergency
Reports To
FEMA Director
Emergency Response Team Advance Element (ERT-A)
FEMA Regional Operations Center (ROC)
THE FEDERAL RESPONSE PLAN
Requests Presidential Declaration
Catastrophic Disaster Response Group (CDRG)
Emergency Support Team(EST)
Other Federal Agencies
Disaster Field Operations
Local
State
Federal
Contacts
President of the United States
Declares Emergency/ Major Disaster
Emergency Support Function
1. Transportation
2. Communications
3. Public Works & Engineering
4. Firefighting
5. Information & Planning
6. Mass Care
7.
8.
9.
10.
11.
12.
Recovery Programs
Mitigation Programs
Provides
Emergency Response Team
Supports
Disaster Field Office
Sets Up
Federal Coordinating Officer
Appoints
DoD and Army Plans

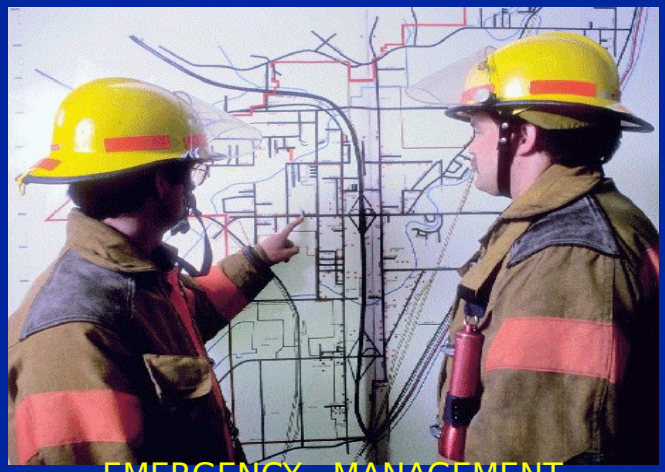
CBRNE Terrorist Incidents Will Involve Every Type of Responder

FIRE SERVICE

LAW ENFORCEMENT

911 SYSTEM AGENCY

EMERGENCY MEDICAL SERVICES



EMERGENCY MANAGEMENT

MEDICAL CENTERS

AMEDD C&S

TO CONSERVE FIGHTING STRENGTH

AMEDD Units Must Maintain CBRNE Readiness

MEDICAL CENTERS

Readiness
is the key
to effective
CBRNE Incident
response

- **Awareness**
- **Planning**
- **Equipment**
- **Resources**
- **Training**
- **Exercises**

CBRNE Training is Tailored

- Awareness (everyone)
- Emergency Medical Technicians
- Emergency Room Personnel
- First Responders (Firemen/HAZMAT)
- Incident Commanders

91D's role in the OR

- Assignments
  - Alert notification
    - Duty hours
    - Non-duty hours
  - OR Teams
    - OR assignments will depend on type of surgeries

Roles continue

- Additional personnel
  - OR runners
  - Decontamination teams
  - Man power teams/ Litter teams

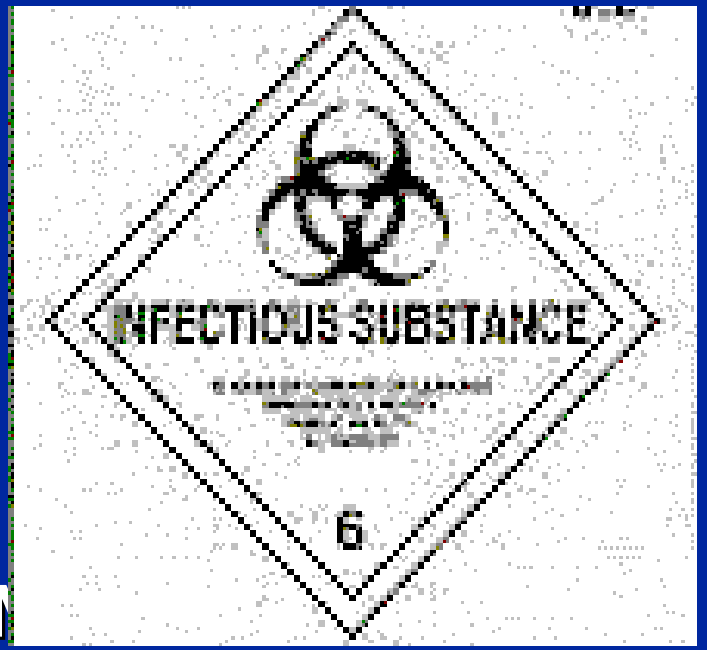
Prepare the Operating Room suites for a CBRNE patient

- Identify which type of CBRNE patients will go into room number, ie..
  - Orthopedic
  - Blast injuries
  - Contaminated patients
  - Biological Patients

Prepare the Operating Room suites

- Use standard precautions for each indivi
case according to local SOP and EPP

HAZCOM



- Hazardous waste
  - All waste material will be saved
  - Large red plastic bags
  - Sealed and tagged as CHEM
  - Handled IAW local SOP and EPP

- All effluents will be captured into a hazardous waste tank, handled IAW local SOP and EPP

91D's Role In The CMS

- Assignments
  - Alert notification
    - During normal duty hours staff the CMS according to patient load.
    - During non-duty hours the On Call Roster and Alert roster will go into effect according to patient load.

Roles In The CMS

- CMS Teams
  - Assignments will be given to CMS personnel to staff the three sections in CMS.
  - Decontamination Room
  - Processing/Sterilizing Room
  - Issue Room

Roles in CMS

- Additional personnel
  - Decontamination Teams
  - Man Power Teams/Litter Teams

Issue Section In CMS

- Prepare to issue out equipment and supplies to EMT and OR sections for CBRNE casualties.

Receiving Section In CMS

- Receive contaminated equipment
  - Identify what section the equipment came from and fill out Turn-In sheet
  - Identify what type of CBRNE patient it was used on
  - Use proper PPE
  - Decontaminate equipment according to SOP and EPP

Processing Section In CMS

- Process equipment according to instruments cards
- Sterilize critical equipment needed for follow on cases

Issue Section In CMS

- Restock depleted supplies
- Reissue equipment to individual sections accordingly

"Americans have known surprise attacks — but never before on thousands of civilians. All of this was brought upon us in a single day — and night fell on a different world, a world where freedom itself is under attack." ***George W. Bush, 9/20/01***

Questions?

OR Branch
BLDG 615

221-0299